CROSS – CURRICULUM CONTENT- collated by Young High School

Stage 5

The Board of Studies has developed cross-curriculum content requirements to be included in the outcomes and content of syllabuses. The identified content will be incorporated appropriately in Years K–10 syllabuses. The cross-curriculum areas address issues, perspectives and policies that will assist students to achieve the broad learning outcomes defined in the Board of Studies *K–10 Curriculum Framework.*

The statements act as a mechanism to embed cross-curriculum content into all syllabuses for Years K–10. Skills, knowledge, understanding, values and attitudes derived from the cross-curriculum content areas will be included in Board syllabuses, while ensuring that subject integrity is maintained.

Each syllabus has been given certain cross-curriculum areas to cover in the course of that subject. Some subjects are asked to cover more of the areas than others, due to the nature of the content.

The cross-curriculum areas are:

* Literacy
* Numeracy
* Information and Communication Technologies (ICT)
* Work, Employment & Enterprise
* Aboriginal and Indigenous
* Civics & Citizenship
* Difference & Diversity
* Gender
* Multicultural

MATHEMATICS

Information and Communication Technology ***(ICT) has been developed with the significant utilisation of mathematics, and a range of opportunities exists within the teaching and learning of mathematics to utilise ICT. For example, spreadsheets may contribute to activities related to tabulating and graphing data sets in both the Patterns and Algebra and Data strands. Graphics calculators can be used for many applications including exploring data sets and investigating curves. Dynamic geometry software packages can assist in illustrating and establishing the properties of geometric figures. Random number generators can facilitate simulation experiments in probability. Data loggers may be used in investigations related to graphing relationships.***

Work, Employment and Enterprise content enables students to develop work-related knowledge, skills and understanding through their study of mathematics. It also provides opportunities for students to develop values and attitudes about work, employment and the workplace.

Specifically this occurs through student study of mathematics in work-related contexts, through selecting and applying appropriate mathematical techniques and problem-solving strategies, and in acquiring, processing, assessing and communicating information.

Numeracy is the ability to effectively use the mathematics required to meet the general demands of life at home and at work, and for participation in community and civic life. As a field of study, mathematics is developed and/or applied in situations that extend beyond the general demands of everyday life.

Numeracy is a fundamental component of learning across all areas of the curriculum. The development and enhancement of students' numeracy skills and understanding is the responsibility of teachers across different learning areas that make specific demands on student numeracy.

To be numerate is to use mathematical ideas effectively to make sense of the world. Numeracy involves drawing on knowledge of particular contexts and circumstances in deciding when to use mathematics, choosing the mathematics to use, and critically evaluating its use. Numeracy incorporates the disposition to use numerical, spatial, graphical, statistical and algebraic concepts and skills in a variety of contexts and involves the critical evaluation, interpretation, application and communication of mathematical information in a range of practical situations.
The key role that teachers of mathematics play in the development of numeracy includes teaching students specific skills and providing them with opportunities to select, use, evaluate and communicate mathematical ideas in a range of situations. Students' numeracy and underlying mathematical understanding will be enhanced through engagement with a variety of applications of mathematics to real-world situations and problems in other key learning areas.

Literacy is the ability to communicate purposefully and appropriately with others, in and through a wide variety of contexts, modes and mediums. While English has a particular role in developing literacy, all curriculum areas, including mathematics, have a responsibility for the general literacy requirements of students, as well as for the literacy demands of their particular discipline.

Mathematics language is concise and precise. Students are taught mathematical vocabulary and the conventions for writing mathematics. Studies have shown that the causes of student errors on word problems may relate to the literacy components rather than the application of mathematical computations. Mathematics at times uses words from everyday language that have different meanings within a mathematical context. This can add to some students' confusion. Clear explanations of these differences will assist students in the acquisition and use of mathematical terminology.

The growth of technology and information, including visual information, demands that students be critically, visually and technologically literate and can compose, acquire, process, and evaluate text in a wide variety of contexts. They need to understand the full scope of a text's meaning, including the wide contextual factors that take meaning beyond a decoding process.

UNIT NAME	Description & Context	Syllabus Outcomes	ICT	Work, Employment & Enterprise	Numeracy	Literacy
Algebra	Stage 4 Algebra reviewed. Operations with algebraic fractions, pattern exercises. Extend a numerical/geometric pattern	PAS 4.3 PAS 5.2.1	Use of spreadsheets and CAS Software	Use of equations in workplace situations.	Patterns, number sequences, tables of value, use of variables.	Algebraic expressions. Terminology – spelling lists, glossaries, procedure texts.
Applying number	Stage 4 number skills in fractions, percentages and money, focussing on the unitary method	NS 4.3	Spreadsheets and calculator use.	Profit and Loss statements, how to work out a discount. Working out percentage of wage going on tax.	Rounding, estimating, expressing quantities, converting, ordering.	Terminology – spelling lists, glossaries, word problems, procedural texts, sequencing of events.
Geometry	Revise Stage 4 geometry and extends knowledge to polygons, their interior and exterior angle sum.	SGS 5.2.1 SGS 4.1 SGS 4.2 SGS 4.3	Graphics calculators, models, centicubes, geometry software.	Building and construction industry – their use of geometry	Measuring, contstructing, working mathematically.	Definitions – properties of angles, terminology – spelling lists, glossaries, word problems, reporting.
Earning & Spending	Consumer arithmetic problems involving earning and spending money.	NS 5.1.2	Spreadsheets, Financial calculators, tax websites, other websites relating to award wages.	Employer/Employee roles, how to work out your salary, hours worked etc… use students own work as examples. How to work out your tax rate. Budgeting.	Budgeting, consumer arithmetic	Consumer language – spelling lists, glossaries, non-fiction texts (menus, price boards, catalogues), class discussions and presentations on budgeting and wages.
Pythagoras' Theorem	Uses formulae and theorem in calculating perimeter and area of figures composed of rectangles and triangles.	MS 4.1 PAS 5.1.2	Spreadsheets, Internet for research on the history of Pythagoras, geometry software.	Look at how the theorem relates to construction, electronics, astronomy.	Measuring, calculating, decimal approximations	Procedure texts, terminology – spelling lists, glossaries, research report on Pythagoras.
Indices	Applies index laws to simplify and evaluate arithmetic expressions and uses scientific notation to write large and small numbers.	NS 5.1.1 PAS 5.1.1 PAS 5.2.1	Calculators, graphics calculators, spreadsheets	Look at how indices help in the work of astronomers.	Index laws, scientific notation, communicating mathematically.	Procedural texts, descriptions.

Coordinate Geometry	Determines the midpoint, length and gradient of an interval joining two points on the number plane and graphs equations.	PAS 5.1.2 PAS 5.2.1	Graphics calculators, graphing software, spreadsheets	How does this work apply to the fields of building and construction and engineering.	Graphing, working mathematically	Procedural texts, developing an idea, labelling.
Time, Length & Area	Concepts and calculations are revised while measurement of area is extended to rhombuses, kites, sectors and trapeziums.	MS 5.1.1 MS 5.2.1 MS 4.1 MS 4.2	Calculators and spreadsheets.	Schedules, graphing percentage of time spent in each endeavour at work, daily living, building and construction industries, mapping of shops, site planning.	Conversion, estimating, calculation, measuring	Class discussions, descriptions of shop layouts etc…, terminology – spelling lists and glossaries. Writing reports.
Exploring Data	Collecting and presenting data, analysing data, extending knowledge to cumulative frequency and grouped data.	DS 5.1.1 DS 4.1 DS 4.2	Graphics calculators, spreadsheets	How different business and government use data. Related careers.	Interpreting tables, describing data, formulating, collecting data, constructing, calculating	Explanation texts, class discussions, interviewing people to collect data.
Equations & Inequalities	Solve linear and simple quadratic equations, solving linear inequalities etc… using graphical, analytical methods.	PAS 5.2.2 PAS 4.4	CAS, spreadsheets, graphics calculators.	The use of equations in certain professions – astronomy, engineering	Solving problems, application of equations, comparing formulating	Procedural texts, terminology – spelling lists, glossaries, explanations.
Congruence & Similarity	Properties of geometrical figures, extends concepts in congruence and similarity	SGS 5.2.1 SGS 4.4	Dynamic geometry	The use of congruence and similarity in graphic designing and for architects.	Matching, applying, calculations, enlarging	Writing a response, explanation and procedural texts.
Exploring Number	Working with numbers, reinforce stage 4 number skills.	NS 4.1 NS 4.2 NS 4.3	Spreadsheets and Calculators	Use of numbers in daily living. The use of numbers in all careers. Use examples from part-time jobs.	Integers, fractions, rational numbers, decimals, estimation	Terminology – spelling lists, glossaries, identifying, representing information in numerical form.

ENGLISH

Information and Communication Technologies (ICT) content in English enables students to develop and apply skills, knowledge and understanding of ICT in their composing, responding and presenting, and as part of the imaginative and critical thinking they undertake in English. The ICT content has been incorporated into the content of this syllabus to ensure that all students have the opportunity to become competent, discriminating and creative users of ICT and are better able to demonstrate the syllabus outcomes of English through the effective use of ICT. In their study of English, students are able to apply their existing knowledge of word processing, multimedia, ways of formatting and presenting texts, simulation software, graphics and electronic communication and further develop their skills, knowledge and understanding of these technologies. They learn about the ethics of information communication through technology. At Stage 5, students use more advanced specified tools and functions of word processing for composing. They learn to create, import and manipulate graphics. They learn about advanced forms of digital communication such as video conferencing.

Work, Employment and Enterprise content in English provides opportunities for students to develop work-related skills, knowledge and understanding and to develop values and attitudes about work, employment and the workplace. These opportunities arise through their study of texts with workplace contexts, through developing skills in speaking and listening, in group processes and in acquiring, processing, assessing and communicating information.

Literacy is the ability to communicate purposefully and appropriately with others in a wide variety of contexts, modes and mediums. Different contexts require general and specific skills, knowledge and understanding as students compose meaning for themselves and others. In this syllabus the teaching of English focuses on the continued development of students' skills in speaking, listening, reading and writing. These skills are fundamental to students' literacy in English. The syllabus also requires the development of students' visual literacy through the development of skills in viewing and representing a diverse range of texts including texts in print, film and other technologies.

Aboriginal and Indigenous content provides all students with the opportunity to develop knowledge and understanding of indigenous history and culture in Australia and internationally. In their study of English, students explore a range of experiences and achievements of Aboriginal peoples in historical and social contexts and the links between cultural expression, language and spirituality.

Civics and Citizenship content involves knowledge and understanding of how our Australian society operates. In their study of English, students consider how civic issues are represented in the public arena, the socially responsible construction and use of media, and the representation of Australian images and significant Australians.

Difference and Diversity content acknowledges that students experience difference and diversity in their everyday life. This experience occurs in their personal life, in the local community and in the wider society. English provides opportunities to assist students to deal with personal, social and cultural difference and diversity in a positive and informed manner, showing awareness, understanding and acceptance. It assists them to develop and express their sense of self, to connect with other people and communities and to understand the features of a fair and just society that values diversity. In particular, the representation of disability and sexuality in texts is a point of focus in the English content.

Gender is a term that refers to the social construction of identity that follows historically from the biological differences between females and males. In English students explore the impact of different gender perspectives, stereotyping, and the social construction of gender in texts including the media.

Multicultural content assists the development of students' skills, knowledge and understanding applicable to the multicultural and multilingual nature of Australian society. In English students explore a diversity of cultures through studying literature, drama and film, cultural and intercultural perspectives and relationships, and the close connections between language, communication and culture

SYLLABUS OUTCOMES	ICT	Work, Employment & Enterprise	Literacy	Aboriginal & Indigenous	Civics & Citizenship	Difference & Diversity	Gender	Multicultural
1: A student responds to and composes increasingly sophisticated and sustained texts for understanding, interpretation, critical analysis and pleasure.							Respond to texts from different gender perspectives.	
2: A student uses and critically assesses a range of processes for responding and composing.		Rehearsed, unrehearsed and impromptu speeches/presentation	Use the process of planning, drafting, editing and publishing to compose texts.			Discuss the range of texts which students regularly read and how and why to widen the texts they read/view.		
3: A student selects, uses, describes and explains how different technologies affect and shape meaning.	The effect of layout and design on meaning. Composing using different technologies.				Discuss ways in which modern technologies of communication are used to inform and persuade. The ethics of ICT in society.			
4: A student selects and uses language forms and features, and structures of texts according to different purposes, audiences and contexts, and describes and explains their effects on meaning.		Discuss the various codes and conventions, including emotive, technical and language and signs used in the workplace	Identify the purpose, audience and context of a text by looking at the language forms, features and structure.	Discuss the use, history and conventions of Aboriginal English.	Look at the use of Standard Australian English – its use and features.			

5: A student transfers understanding of language concepts into new and different contexts.		Compose written, oral and visual texts for a workplace context (ie. Interviews, presentations, resumes, letters).	The selection, organisation and coherance of information and ideas into text.					
6: A student experiments with different ways of imaginatively and interpretively transforming experience, information and ideas into texts.			Explore the way filmakers transfer concepts into film.					
7: A student experiments with different ways of imaginatively and interpretively transforming experience, information and ideas into texts.		Asking perceptive and relevant questions.	Infer from and interpret text.	Learn how bias, stereotypes, perspectives and ideologies are constructed in texts.		Learn how bias, stereotypes, perspectives and ideologies are constructed in texts.	Learn how bias, stereotypes, perspectives and ideologies are constructed in texts.	Learn how bias, stereotypes, perspectives and ideologies are constructed in texts.
8**:** A student investigates the relationships between and among texts**.**	The patterns of texts composed using different technologies.		Identify and describe the similarities and differences between and among texts. Identify and describe the recurring features of particular genres.		Similarities of approach, attitude, intent, POV, perspective and style in text by different Australian composers.			
9: A student demonstrates understanding of the ways texts reflect personal and public			Describe ways in which their own responses to texts are personal and reflect their			Identify different reading positions and interpretations of particular texts.		

worlds.			own context.					
10: A student questions, challenges and evaluates cultural assumptions in texts and their effects on meaning.	Effect of ICT on language & communication.	Identify language, content and structure of workplace texts.		Identify, explain & challenge cultural values expressed through language and structure in texts. Compose texts that reflect cultural attitudes other than their own.		Identify explain and challenge cultural values expressed through language and structure in texts. Compose texts that reflect cultural attitudes other than their own	Identify explain and challenge cultural values expressed through language and structure in texts. Compose texts that reflect cultural attitudes other than their own	Identify explain and challenge cultural values expressed through language and structure in texts. Compose texts that reflect cultural attitudes other than their own
11: A student uses, reflects on, assesses and adapts their individual and collaborative skills for learning with increasing independence and effectiveness.	Learn to choose resources & technologies appropriate for particular tasks & situations.	Establish & adopt roles through group work. Meet deadlines and set goals through research tasks. Discuss successes and problems. Delegate.	Note taking, research and presentation of information. Writing bibliographies					